Minutes:
Process Standardization Working Group Meeting

Wednesday, February 23, 2000
Mesa Community & Conference Center - 201 N. Center St. Mesa, Arizona 85201

	Topic	*Lead*	*Outcome*	*Att.*
1	Opening Remarks	Deborah Scott	Deborah Scott welcomed participants to the meeting and thanked them for their work. Ms. Scott explained rulemaking procedures. Ms. Scott also reported that Salt River Project would be allowed to vote because it had filed the necessary letter.	
2	Introductions, Review of Agenda, & Warm-up	Laurie Goggin and Patricia Sorensen	Ms. Goggin reviewed the agenda. Ms. Sorensen reviewed the ground rules. A sign-in sheet was circulated. Participants are listed in Attachment 1. Participants introduced themselves and provided positive and negative feedback about the Working Group (See Attachment 2).	1,2
3	PSWG Change in Schedule	Evelyn Dryer and Deborah Scott	The change in schedule was discussed. Two subcommittees have been delayed.	
4	Review and Approval of Minutes from 1-7-00 PSWG Meeting	Deborah Scott	Minutes were approved with no corrections.	
5	Status Report from Policy Group	Evelyn Dryer	(See Attachment 3 in att3.ppt for copies of overhead slides.) Evelyn Dryer described the charge and objectives of the Policy Group and reported on its status.	3
6	Status Report from Metering Systems and Meter Reading Group	Darrel Pichoff, Stacy Aguayo, and Renee Castillo	(See Attachment 3 in att3.ppt for copies of overhead slides.) Darrel Pichoff described the charge and objectives of the Metering Group. Stacy Aguayo reported on its status. Ms. Aguayo provided the following handouts: "UDC Meter Data Element Meeting 2-14-00 (Status Report)," "Meter Data Comparison-Bundled Customer (meter exchange required) to Direct Access (Current UDC Practices)," "Meter Data Comparison-Bundled Customer (meter exchange required) to Direct Access (Ideal Data Elements)," and "UDC Business Rule Comparison - Bundled Customer (meter exchange required) to Direct Access." Handouts are in Attachment 4. Renee Castillo described the future steps of the Metering Group.	3,4
7	Status Report from Billing Group	Janie Mollon and Shirley Renfroe	(See Attachment 3 in att3.ppt for copies of overhead slides.) Janie Mollon described the charge of the previous Billing Group and the objectives of the current Billing Group. Shirley Renfroe reported on the group's status and its future steps. Ms. Renfroe provided the handout "Business Processes for ESP Consolidated Billing" in Attachment 5.	3,5
8	XML Report	Ray Wenzel and Evelyn Dryer	(See Attachment 3 in att3.ppt for copies of overhead slides.) Ray Wenzel provided an overview of XML. Evelyn Dryer may arrange for a future speaker on XML if there is enough interest. Anyone interested in hearing such a presentation should send an E-mail to Ms. Dryer.	3
9	Review of Questions and Answers	Laurie Goggin	Laurie Goggin reviewed questions that had been asked during the meeting. The questions are listed in Attachment 6.	6
10	Meeting Evaluation	Laurie Goggin	On a scale of 1 to 10, with 10 be highest, the majority of the group rated the meeting from 8 to 10.	

	Topic	Lead	Outcome	Att.
11	Adjourn	Laurie Goggin	The meeting adjourned. The next meeting will be April 5, 2000.	

PARTICIPANTS AT FEBRUARY 23, 2000,
PROCESS STANDARDIZATION WORKING GROUP MEETING

Name	Organization
Stacy Aguayo	Arizona Public Service Company
Priscilla Bertling	City of Mesa
Jana Brandt	Salt River Project
Marvin Buck	Computer Sciences Corp.
Darron Carlson	Arizona Corporation Commission Staff
Renee Castillo	Salt River Project
Anne Cobb	Trico Electric Cooperative
Deborah Diaz	Tucson Electric Power Company
Evelyn Dryer	Tucson Electric Power Company
Donna Easterly	Arizona Public Service Company
Marilyn Ferrara	APS Energy Services
Bob Gray	Arizona Corporation Commission Staff
Bud Haas	Citizens Utilities Company
Tim Jones	TeldataFirst Point
Barbara Keene	Arizona Corporation Commission Staff
Barbara Klemstine	APS Energy Services
Stephen McArthur	Mohave Electric Cooperative
Ed Mangan	Energy Consulting & Design
John Merideth	Arizona Electric Power Cooperative
Paul Michaud	Navopache Electric Cooperative
Janie Mollon	New West Energy
Larry Nuszloch	Salt River Project
Lindee Nuzum	Arizona Public Service Company
Paul O'Dair	Navopache Electric Cooperative
Darrel Pichoff	K.R. Saline & Associates
Shirley Renfroe	Arizona Public Service Company
Bill Rigsby	Arizona Corporation Commission Staff
David Rumolo	GCSECA
Jenine Schenk	Arizona Public Service Company
Barry Scott	Sulphur Springs Valley Electric Cooperative
Deborah Scott	Arizona Corporation Commission Staff
Stacy Searbrough	Arizona Public Service Company
Joe Sheehey	Tucson Electric Power Company
Eugene Slechta	Salt River Project
Jerry Smith	Arizona Corporation Commission Staff
Judy Taylor	Tucson Electric Power Company
Jana VanNess	Arizona Public Service Company
Ray Wenzel	Excelergy
Lee Wilfert	Arizona Electric Power Cooperative
Ray Williamson	Arizona Corporation Commission Staff
Jim Wontor	APS Energy Services
June Greenrock	Salt River Project
Ted Adamczyk	Arizona Electric Power Cooperative
Jacquelyn Cook	Arizona Electric Power Cooperative
Jack White	Salt River Project

facilitators = Laurie Goggin and Patricia Sorensen, City of Mesa

PARTICIPANT FEEDBACK ABOUT WORKING GROUP

Valuable	Need to Change
Cooperation, willingness to hammer out issues	Get more market participants participating
Facilitators	Temper where rule must be in place versus where we have ability to do it differently
Cooperation - working together	Time pressure
Good blend of utilities/ESPs	Some of documents other than 8 1/2 x 11 become cumbersome with E-mail
See real teamwork (consensus, conclusions)	Hope some flexibility with rules
Facilitators and how well we are working together	Facilitators had to leave early at times - no back-up
Establishing relationships	Relief to chair people
Facilitation and infrastructure (minutes, agendas, etc.)	Time and distance
Recognition of challenges small entities are faced with	Need more market participation
Change in schedule	More dialogue with ACC - impact of report in June (impact on rules/regs)
Facilitators developed clear process, well organized	Work towards process not substantive issues
Documentation good - follow issues very well	More participation from MSPs, MRSPs
Wise decision to focus goals and deadlines	More work we do - more we have
Great experience, opportunity to learn a lot	How work product will be implemented
Everyone working hard	Schedule - very aggressive
Exchange and flow of information	Time and distance
Direct purpose	Managing overflow issues between subcommittees
Minutes and attachments keep me up-to-date	Time to get started on a data dictionary
Documentation excellent	More help needed
Facilitation has helped a lot	Participation - 2 ESPs (need MSP and MRSP participation)
Dedicated chair people	"Consumer Report" matrix in final report
Orchestrating the mayhem	Better job of capturing team member comments on final report format, content, etc.
Hard work by everyone	
Good relationship building	
Appreciate Staff work and time	
Organized - working towards common goal	
Subcommittees willing to work with people new to issues process	
Minutes and facilitators	
Working well as group	
E-mail	
Getting to know other members	
Good minutes - easy to follow	
Courtesy in groups	
Acknowledgement of utilities - may be better way of doing business	
Looked at processes, what is working, what should be doing	
Looking at progress and how going	
Willingness to discuss - participation and feedback	
Amazed with facilitators picking up process	
Eye opener - how all do business	
Participation - speaking up	
Good structure	

UDC Meter Data Element Meeting 2-14-00
(Status Report)

Representatives from TEP, SRP and APS met to compare the meter data elements used in the process of switching a customer, who requires a meter change, from UDC Bundled Service to Direct Access. Additionally, the business rules for this particular scenario were compared and documented. Finally, the group began preliminary documentation of what could be considered an "ideal" scenario, eventually resulting in standardization of the meter data elements.

In previous subcommittee meetings it was identified that TEP, SRP and APS have four common process steps when a Bundled Service customer switches to Direct Access. These common process steps were used as the backbone for identifying the data elements as well as the business rules needed in each step. The steps are as follows:

1. ESP sends an Enrollment DASR to UDC
2. UDC sends existing meter information to MSP/ESP
3. MSP/ESP sends scheduling information back to the UDC
4. MSP/ESP sends information about newly installed meter

The following documents have been created as a tool to illustrate the differences and similarities between the UDCs.

Document Title	Description
Meter Data Comparison – Bundled Customer (meter exchange required) to Direct Access *(Current UDC Data Elements)*	Identifies the **current** meter data element required for TEP, SRP and APS.
Meter Data Comparison – Bundled Customer (meter exchange required) to Direct Access *(Ideal Data Elements)*	Identifies preliminary work for standardizing the meter data element between TEP, SRP and APS.
UDC Business Rule Comparison -- Bundled Customer (meter exchange required) to Direct Access	Identifies the current business rule requirement for TEP, SRP and APS.

Meter Data Comparison – Bundled Customer (meter exchange required) to Direct Access
(CURRENT UDC PRACTICES)

STEP #1 Data from the Enrollment DASR

Data Element	Req/ Opt	Size	Type	TEP	SRP	APS	TRICO	NWE	APSES	Other
Data Elements begin with Step #2										

STEP #2 Metering Information from UDC to MSP/ESP

Data Element	Required, Conditional or Optional	Size	Type	TEP	SRP	APS	TRICO	NWE	APSES	Other
Customer name	R			X	X	X				
Service address	R			X	X	X				
Business Name						X				
Customer Phone					X					
Building/Unit						X				
Service city/town	R			X	X	X				
Date sent	R			X	X	X				
Existing meter number	R			X	X	X				
Universal Node Identifier (UNI)				X		X				
DASR Tracking Number				X	X					
ESP name				X		X				
ESP DUNS				X						
ESP email				X						
MSP name				X		X				
Scheduling options						X				
*Exchange Meter						X				
Billing cycle				X		X				
ESP requested cut-over date				X		X				
Site (joint) meet required by UDC (if applicable)	C			X	X	X				
Current owner of Meter						X				
Current owner of CT/PT (VT)				X		X				
Totalized/Combined Metering (y/n)				X		X				
Equipment purchase order attached				X		X				
Medical Monitoring (y/n)						X				
Voltage monitoring Equipment				X		X				
Order type						X				
*Exchange Meter (exchange of existing meter)						X				
Existing meter owner (page 2 on APS form)						X				
Existing meter Universal Meter Identifier (UMI)				X						
Existing meter serial number						X				
Existing meter model/type	R			X	X	X				
Existing meter register model/type						X				
Existing meter form number	R			X	X	X				
IDR recorder (y/n)	R			X	X	X				
Test amps	R			X	X	X				

Meter voltage	**R**			**X**	**X**	**X**				
Disk constant (kh)	**R**			**X**	**X**	**X**				
Dial constant (Meter multiplier)	**R**			**X**	**X**	**X**				
Customer pulse (ke)				**X**		**X**				
CT ratio	**R**			**X**	**X**	**X**				
CT type						**X**				
CT id number (s)						**X**				
CT serial number (s)						**X**				
PT (VT) ratio	**R**			**X**	**X**	**X**				
PT (VT) type						**X**				
PT (VT) id number (s)						**X**				
PT (VT) serial number (s)						**X**				
Remarks (comments – APS uses this field for read info)						**X**				
Program ID				**X**	**X**					
Communications (modem) Module No.					**X**					
KYZ Output				**X**	**X**					
Tariff Rate					**X**					
Meter Class				**X**	**X**					
Read Dates (3)				**X**	**X**					
Register Ratio				**X**	**X**					
Characteristics (Delta/Wye/Network)				**X**	**X**					
Phase				**X**	**X**					
Wires				**X**	**X**					
Number of Dials				**X**	**X**					
Special Read Remarks (type of meter)				**X**	**X**					
Meter Location (where meter can be found)				**X**	**X**					
Read Instructions (how to get to read the meter)				**X**	**X**					
DA Ready (SRP service territory)					**X**					
Purchase Date				**X**						
Return of equipment				**X**	**X**					

STEP #3 Scheduling Information from MSP/ESP to UDC

Data Element	Required, Conditional or Optional	Size	Type	TEP	SRP	APS	TRICO	NWE	APSES	Other
Local field contact name						X				
Local field contact phone/pager						X				
Site meet required by MSP				X	X	X				
MSP scheduled Estimated work date				X		X				
Agreed upon site meet date/time	C			X	X	X				
Pending owner of meter (Generic term - customer, ESP or MSP)						X				
*Name				X	X					
*Address				X	X					
*DUNS (optional)					X					
Pending owner of CT/PT (VT) (Generic term- customer, ESP or MSP)						X				
Purchase existing CT/PT (VT) (y/n)				X		X				
Purchase existing totalized/combined equipment (y/n)						X				
Purchaser of existing CT/PT (VT) *ESP						X X				
*MSP						X				
*Customer						X				
Purchaser of existing totalized/combined equipment						X				
*ESP						X				
*MSP						X				
*Customer						X				
Remarks						X				
Installer (UDC or MSP)					X					
Communications to be installed				X	X					
ESP Provided Meter Manufacturer				X						
Meter Type				X						
Form Number				X						
IDR Type				X						

STEP #4 Meter Information from MSP/ESP to UDC (Post Meter Exchange)

Data Element	Required, Conditional Optional	Size	Type	TEP	SRP	APS	TRICO	NWE	APSES	Other
Date completed	R			X	X	X				
Time Completed				X		X				
New meter owner (specific Company or Customer Name)						X				
New meter number					X	X				
New meter UMI						X				
New meter serial number						X				
New meter model type						X				
New meter register model/type						X				
New meter form number					X	X				
New meter test amps						X				
New meter voltage					X	X				
New meter disk constant (kh)						X				
New meter dial constant (multiplier)					X	X				
New meter customer pulse (ke)					X	X				
Most recent calibration test date						X				
Test – full load				X	X					
Test – light load				X	X					
Test – Power Factor				X	X					
IDR recorder (y/n)	R			X	X	X				
Existing hard dial meter read (kwh)	C			X	X	X				
Existing hard dial meter read (kw)	C			X	X	X				
Existing meter read display 01 (if applicable)	C			X	X	X				
Existing meter read display 02	C			X	X	X				
Existing meter read display 03	C			X	X	X				
Existing meter read display 04	C			X	X	X				
Existing meter read display 05	C			X	X	X				
Existing meter read display 06	C			X	X	X				
Existing meter read display 07	C			X	X	X				
Existing meter read display 08	C			X	X					
Existing meter read display 09	C			X	X					
Existing meter read display 10	C			X	X					
Existing meter read display 11	C			X	X					
Existing meter read display 12	C			X	X					

New meter read (kwh)				X		X				
New meter read (kw)				X		X				
Return of equipment (Ship or deliver)						X				
New meter display number				X		X				
*kwh				X		X				
*kw				X		X				
New meter number of dials					X	X				
*kwh						X				
*kw						X				
New meter display decimal value						X				
*kwh						X				
*kw						X				
Condition of returned meter						X				
Condition of returned CT/PT (VT)						X				
Remarks (comments)	O			X	X	X				
Tariff Rate				X	X					
Communication module Number					X					
Billing Multiplier					X					
CT ratio (only on new equipment)					X	X				
CT type						X				
CT id number (s)						X				
CT serial number (s)						X				
CT Use (indoor vs. outdoor)						X				
PT (VT) ratio (only on new equipment)					X	X				
PT (VT)type						X				
PT (VT) id number (s)						X				
PT (VT) serial number (s)						X				
PT (VT) Use (indoor vs. outdoor)						X				
KYZ Output				X	X					
Program ID				X	X					
Special Read Remarks				X	X					
Meter Location				X	X					
Read Instructions				X	X					
Rated primary volts (only on new equipment)						X				
Rated primary amps (only on new equipment)						X				

Meter Data Comparison – Bundled Customer (meter exchange required) to Direct Access
(IDEAL DATA ELEMENTS)

STEP #1 Data from the Enrollment DASR

Data Element	Size	Type	TEP	SRP	APS				
Data Elements begin with Step #2									

STEP #2 Metering Information from UDC to MSP/ESP

Data Element	Size	Type	TEP	SRP	APS	Ideal Data Elements Required = R Conditional = C Optional = O
Customer name					X	
Service address			X	X	X	R
Business Name (DBA)					X	C – used if data available
Mailing Address (Trico to address)						
Customer Phone				X		Delete
Building/Unit					X	Delete
Service city/town/county			X	X	X	R
Date sent from UDC			X	X	X	R
Existing meter number			X	X	X	R
Universal Node Identifier (UNI)			X		X	R
DASR Tracking Number			X	X		R
ESP name			X		X	R – while paper forms are used Janie suggested using ticker symbol for name (NWE, APSES, etc)
ESP DUNS			X			R – when electronic format is used –EDI 650
ESP email			X			Delete
MSP name			X		X	R – while paper forms are used
MSP DUNS						R – when electronic format is used – EDI 650
Scheduling options					X	Delete
*Install Meter (new service)					X	Delete
*Exchange Meter					X	R
*Upgrade Meter						R
Billing cycle number			X		X	R
ESP requested change date			X		X	Delete
Site meet required by UDC (y/n)			X	X	X	R (reasons for site meet may vary within service territories)
Current owner of Meter					X	Delete
Current owner of CT/PT (VT)			X		X	Delete
Totalized/Combined Metering (y/n)			X		X	R
Associated equipment purchase order(s) (y/n)			X		X	R
Medical Monitoring (y/n)					X	R
Voltage, electrical, special monitoring Equipment			X		X	Delete – this information will appear in Remarks area of document
Order type					X	
*Install Meter (install of new meter)					X	
*Exchange Meter (exchange of existing meter)					X	

Existing meter owner (page 2 on APS form)					X	
Existing meter Universal Meter Identifier (UMI) *[Not used at this time]*			X			
Existing meter serial number					X	
Existing meter model/type			X	X	X	
Existing meter register model/type					X	
Existing meter form number			X	X	X	
IDR recorder (y/n)			X	X	X	
Test amps			X	X	X	
Meter voltage			X	X	X	
Disk constant (kh)			X	X	X	
Dial constant (Meter multiplier)			X	X	X	
Customer pulse (ke)			X		X	
CT ratio			X	X	X	
CT type					X	
CT id number (s)					X	
CT serial number (s)					X	
PT (VT) ratio			X	X	X	
PT (VT)type					X	
PT (VT) id number (s)					X	
PT (VT) serial number (s)					X	
Remarks (comments – APS uses this field for read info)					X	
Program ID			X	X		
Communications (modem) Module No.				X		
KYZ Output			X	X		
Tariff Rate				X		
Meter Class			X	X		
Read Dates (3)			X	X		
Register Ratio			X	X		
Characteristics (Delta/Wye/Network)			X	X		
Phase			X	X		
Wires			X	X		
Number of Dials			X	X		
Special Read Remarks (type of meter)			X	X		
Meter Location (where meter can be found)			X	X		
Read Instructions (how to get to read the meter)			X	X		
DA Ready (SRP service territory)				X		
Purchase Date			X			
Return of equipment			X	X		

Reactive Metering required (y/n)						**R – if applicable**

STEP #3 Scheduling Information from MSP/ESP to UDC

Data Element	Size	Type	TEP	SRP	APS	Ideal Ideal Data Elements Required = R Conditional = C Optional = O
Local field contact name					**X**	
Local field contact phone/pager					**X**	
Site meet required by MSP			**X**	**X**	**X**	
MSP scheduled Estimated work date			**X**		**X**	
Agreed upon site meet date/time			**X**	**X**	**X**	
Pending owner of meter (Generic term - customer, ESP or MSP)					**X**	
*Name			**X**	**X**		
*Address			**X**	**X**		
*DUNS (optional)				**X**		
Pending owner of CT/PT (VT)					**X**	
Purchase existing CT/PT (VT) (y/n)			**X**		**X**	
Purchase existing totalized/combined equipment (y/n)					**X**	
Purchaser of existing CT/PT (VT) *ESP					**X** **X**	
***MSP					**X**	
*Customer					**X**	
Purchaser of existing totalized/combined equipment					**X**	
*ESP					**X**	
***MSP					**X**	
*Customer					**X**	
Remarks					**X**	
Installer (UDC or MSP)				**X**		
Communications to be installed			**X**	**X**		
ESP Provided Meter Manufacturer			**X**			
Meter Type			**X**			
Form Number			**X**			
IDR Type			**X**			

STEP #4 Meter Information from MSP/ESP to UDC (Post Meter Exchange)

Data Element	Size	Type	TEP	SRP	APS	Ideal
Date completed			X	X	X	
Time Completed			X		X	
New meter owner (specific Company or Customer Name)					X	
New meter number				X	X	
New meter UMI					X	
New meter serial number					X	
New meter model type					X	
New meter register model/type					X	
New meter form number				X	X	
New meter test amps					X	
New meter voltage				X	X	
New meter disk constant (kh)					X	
New meter dial constant (multiplier)				X	X	
New meter customer pulse (ke)				X	X	
Most recent calibration test date					X	
Test – full load			X	X		
Test – light load			X	X		
Test – Power Factor			X	X		
IDR recorder (y/n)			X	X	X	
Existing hard dial meter read (kwh)			X	X	X	
Existing hard dial meter read (kw)			X	X	X	
Existing meter read display 01 (if applicable)			X	X	X	
Existing meter read display 02			X	X	X	
Existing meter read display 03			X	X	X	
Existing meter read display 04			X	X	X	
Existing meter read display 05			X	X	X	
Existing meter read display 06			X	X	X	
Existing meter read display 07			X	X	X	
Existing meter read display 08			X	X		
Existing meter read display 09			X	X		

Existing meter read display 10			X	X		
Existing meter read display 11			X	X		
Existing meter read display 12			X	X		
New meter read (kwh)			X		X	
New meter read (kw)			X		X	
Return of equipment (Ship or deliver)					X	
New meter display number			X		X	
*kwh			X		X	
*kw			X		X	
New meter number of dials				X	X	
*kwh					X	
*kw					X	
New meter display decimal value					X	
*kwh					X	
*kw					X	
Condition of returned meter					X	
Condition of returned CT/PT (VT)					X	
Remarks (comments)			X	X	X	
Tariff Rate			X	X		
Module Number				X		
Billing Multiplier				X		
CT ratio				X	X	
CT type					X	
CT id number (s)					X	
CT serial number (s)					X	
CT Use (indoor vs. outdoor)					X	
PT (VT) ratio				X	X	
PT (VT)type					X	
PT (VT) id number (s)					X	
PT (VT) serial number (s)					X	
PT (VT) Use (indoor vs. outdoor)					X	
KYZ Output			X	X		
Program ID			X	X		
Special Read Remarks			X	X		
Meter Location			X	X		
Read Instructions			X	X		
Rated primary volts					X	
Rated primary amps					X	

UDC Business Rule Comparison

Bundled Customer (meter exchange required) to Direct Access

UDC Process Description	SRP	TEP	APS	Other
Assumptions:	**Phase I** (now until 12/31/00)– Customers with loads of 1mW and above are eligible for competitive metering (MSP). **Phase II** (12/31/00 and beyond) All customers are eligible for competitive metering. Customers with yearly loads of 100,000 kWh and above require installation of IDR metering. SRP can continue to provide metering services upon request.	Customers with loads greater than 20 kW require IDR metering. TEP will no longer provide MSP services to any DA commercial customers or residential customers with loads greater than 20kW.	Customers with loads greater than 20 kW require IDR metering. APS will no longer provide MSP services to any DA commercial customer or residential customers with loads greater than 20kW.	Customers with loads greater than 20 kW require IDR metering. Coops can provide MSP services to any DA commercial customer or residential customers as long as they are not competing outside of the service territory R14-2-1615C.
Step 1 – ESP Sends Enrollment DASR *(#1 in Meter Data Element Comparison Document)*	ESP Services receives DASR and forwards pertinent information via SRP's CIS system to Metering SPC.	ESP Services receives DASR and forwards metering information to TEP's Meter Shop SPC.	MAC (Meter Activity Coordinator) receives DASR information electronically from ESP Services.	Navopache – ESP provides DASR 5 workdays prior to switch. MSP must give 5 days notice of joint meet.
Step 2 – UDC sends existing meter attributes etc. to MSP/ESP *(#2 in Meter Data Element Comparison Document)*	Metering SPC sends MI to MSP/ESP via email or fax. Excel document **Timing Requirements:** Sent within 3 workdays of receiving DASR information	Metering SPC sends the MI to ESP or MSP via email or fax. Excel document or PDF. **Timing Requirements**: Sent within 5 workdays of receiving DASR information.	APS MAC send page 1 and 2 of MAC form and purchase order if applicable to MSP/ESP via email or fax. (PDF form). **Timing Requirements:** Sent within 3 workdays of receiving DASR information.	
Step 2.1 – What is the period of time that an MSP can not exchange the meter? **(Blackout Window)**	No blackout window	An MSP cannot exchange a meter 5 calendar days prior to a read date.	An MSP can not exchange the meter 6 workdays prior to the first APS read date, through the read window. The	Navopache – A MSO cannot exchange a meter within 5 calendar days prior read date.

			read window can be 3-5 workdays	Trico – A MSP cannot exchange a meter within 3 workdays prior to read and 2 workdays after read.
Step 3 – MSP/ESP sends scheduling information to UDC *(#3 in Meter Data Element Comparison Document)*	MSP returns MI form (bottom half of form) to SPC with estimated scheduling information and pending ownership info. Additional phone coordination is required for site meets. **Timing Requirements**: Form must be returned at least 3 working days prior to the exchange.	MSP sends the MI form back with ownership changes and metering options indicated. Additional phone coordination is required for site meets. **Timing Requirements:** The form must be returned 5 workdays prior exchange or install date.	MSP sends page 1 of MAC form back to APS with estimated scheduling information and pending ownership information and signed equipment purchase orders. Additional coordination may be needed for purchase order. Additional phone coordination is required for site meets. **Timing Requirements:** Form must be returned at least 5 working days prior to the exchange.	
Step 3.1 – MSP exchanges meter – When does ESP take responsibility for meter/customer?	In SRP service territory, all MSP metering must be complete 10 workdays prior to the actual DA switch date. Therefore, SRP is still responsible for billing the generation consumption until the switch date. The ESP takes responsibility the first minute after midnight on the switch/read date. If a meter exchange takes place after the switch, the ESP takes responsibility for billing the generation consumption. Add CT and PT and associated equipment process…. Load Research process	ESP takes responsibility upon removal of TEP meter. Add CT and PT and associated equipment process…. Load Research process	ESP takes responsibility for meter/customer the first full 15 minute interval for a commercial customers with loads over 20 kW, that the new meter is in the socket. For customers with residential loads under 20 kW, the ESP would be responsible for the first 60 minute interval. Add CT and PT and associated equipment process…. Load Research process	Navopache – ESP will take responsibility when the UDC takes the final reading.

	CA model – If there is a meter exchange, the switch date takes place upon the meter exchange date.			
Step 3.2 –Who is responsible for the usage while the meter is out of the socket during the exchange?	If the switch to DA has not yet taken place (see step 3.1), SRP is responsible for calculating lost registration while the meter is out of the socket. If the switch to DA has already taken place, the MSP is responsible for calculating the lost registration. The method we suggest for calculating the lost registration- Take current registration for a certain period of time, beginning and end. Stopwatch check. # of Revolutions X Kh X 3.6 Time in Seconds This should give the kW X multiplier. **CA model – The ESP takes responsibility the first 15 minute interval after the meter is installed into the socket.**	ESP takes responsibility of consumption once MSP removes TEP meter.	If the meter is out of the socket during the exchange greater than 15 minutes, APS requires the MSP to calculate the "lost registration" and add it to the out-read on the APS meter. A stopwatch check will be used to calculate lost registration. Other suggestion: use a power measuring meter (Dranets) if they have the equipment.	
Step 4 – MSP/ESP sends information about newly installed meter and required UDC meter information to the	**Timing Requirement**: MSP must return the Exchange/Removal/Read form within 2 workdays after install	**Timing Requirement**: MSP must return the Meter Activity Form within 3 workdays of install or exchange. The meter	**Timing Requirement:** MSP must return Page 2 of the MAC form no later than 3 working days from	MSP must return data with 5 days**.**

UDC. *(#4 in Meter Data Element Comparison Document*	day. This form can be returned by email or fax. The SRP meter must be returned within 5 workdays after the install date. The meter must shipped to the address on forms.	must returned to TEP within 15 calendar days of removal. This form can be returned by email or fax. The meter can be shipped or dropped off at 3 offices.	the day of the exchange. Additionally, the form must be returned before the Blackout Window. The meter must be returned to APS within 15 workdays of removal. This form can be returned by email or fax. The meter can be shipped or dropped off at several offices.	

BUSINESS PROCESSES FOR ESP CONSOLIDATED BILLING

#	Business Area/Rule	APS	SRP	TEP	TRICO	Other (Co-ops) [Graham County and Duncan tend to be different]	AZ Best Practice	Issue
1	Bill is generated by UDC	Yes	N/A	Yes	Yes	Yes		
2	Need meter reads for metered accounts to bill	Yes	Yes	Yes	Yes	Yes		
3	Multiple parties are reading the Meter	Yes	N/A	Yes	Yes	Yes		
4	Each party is performing validation on meter and billing data	Yes	N/A	Yes	Yes	Yes		
5	UDC is not required to pay ESP for ESP charges for UDC consolidated until the customer pays the UDC	Yes	N/A	Yes	Yes	Yes		
6	ESP is required to pay ESP receivables	Yes	N/A	Yes	Yes	Yes		
7	ESP is required to pay UDC for UDC charges for ESP consolidated billing	Yes	N/A	Yes	Yes	Yes		17
8	Each UDC ties a customer to a cycle	Yes	Yes	Yes	Yes	Yes		
9	UDCs and ESPs rely on electronic data	Yes	N/A	Yes	Yes	Yes		
10	Bills are presented in US currency only	Yes	Yes	Yes	Yes	Yes		
11	Rate Structure	3 Direct Access Rates – 2 commercial and 1 residential	Direct Access rate for every Standard Offer rate (exception: prepaid metering rate).	Direct Access rate for every Standard Offer rate.	Direct Access rate for every Standard Offer rate.	Direct Access rate for every Standard Offer rate.		
12	Validation Rules	Not addressed at this time	Not addressed at this time	Not addressed at this time	Not addressed at this time	Not addressed at this time		19 (24,
13	Due date on bill	All bills rendered by the Company are due and payable no later than 15 calendar days from the billing date	21 calendar days from bill date (Bill date and Invoice date mean the same)	Payments for TEP products and services shall be delivered to TEP within 10 business days of the TEP invoice date. (Bill date and Invoice date mean the same)				
14	Number of cycles	21	21	21	8	9 (Navopache)		
15	Number of days in cycle	No less than 25 days and no more than 35 days	26 - 32	26-34				
16	Time frame between read date & bill date	3-7 Calendar days	1-3 Calendar days	1-3 Calendar days	1- 3 Working days			
17	Bill data will be transported to the ESP via	Value Added Network (VAN)	Not applicable for ESP Consolidated Billing. Data transport is Internet EDI for all data transactions except 820.	Exolink (VAN)	VAN (?)			

#	Business Area/Rule	APS	SRP	TEP	TRICO	Other (Co-ops) [Graham County and Duncan tend to be different]	AZ Best Practice	Issue
18	Data security for billing information	APS relies on the VAN to provide data security. Data is sent over a secured socket to the VAN	S/MIME	TEP encrypts before transmitting to Exolink and Exolink handles the security to Trading Partner.				
19	Delivery timeframe for bill ready data to ESP	810 will be sent the same day as the bill date	N/A	Flat file will be sent to Exolink same day as bill date, Exolink will send to Trading Partner the same day				5
20	Dispute resolution process for meter reads between UDC & ESP	If APS is the MRSP, the ESP may request a verify read. The cost of such rereads, which is $10, may be charged to the ESP, provided that the original reading was not in error.	If SRP is the MRSP, the ESP may request a verify read. The cost of such rereads, is $__ for Metro Area and &___ outside Metro Area, may be charged to the ESP, provided that the original reading was not in error.	The MRSP shall, at the request of its customer, the customer's ESP, TEP or the billing entity, reread that customer's meter within ten working days of the original read and post the read to read servers. Any meter reread costs may be charged to the entity requesting reread, provided the original reading was not in error.				7,19 (24,5)
21	Dispute resolution process for meter reads between UDC & customer	If APS is the MRSP, the customer may request a verify read. The cost of such rereads, which is $10, may be charged to the Customer, provided that the original reading was not in error.	If SRP is the MRSP, the ESP may request a verify read. The cost of such rereads, a charge $__ for Metro Area and &___ outside Metro Area, may be charged to the ESP, provided that the original reading was not in error.	The MRSP shall, at the request of its customer, the customer's ESP, TEP or the billing entity, reread that customer's meter within ten working days of the original read and post the read to read servers. Any meter reread costs may be charged to the entity requesting reread, provided the original reading was not in error.				

#	Business Area/Rule	APS	SRP	TEP	TRICO	Other (Co-ops) [Graham County and Duncan tend to be different]	AZ Best Practice	Issue
22	Dispute resolution process for bill data between UDC & ESP	ESP notifies APS via e-mail or phone of any disputed bill data. APS will research disputed data and re-bill if needed.		The ESP shall be responsible for notifying the customer and adjusting the bill for ESP charges affected by the meter or billing error. TEP shall be responsible for any recalculation of any incorrect TEP charges. Following the receipt of any recalculated charges from TEP, the ESP will apply the charges or credits to the customer's next normal monthly bill, unless the parties otherwise agree that the ESP send an interim bill including the TEP charges to the customer. TEP will transmit corrected billings to the ESP for incorporation in the customer's bill using one of the following methods: a. By sending a cancellation notice, which cancels the bill in its entirety, and if appropriate, a re-bill will be included in same transmission. b. By transmitting an adjustment amount with a description of the adjustment.				7,19 (24,5)

#	Business Area/Rule	APS	SRP	TEP	TRICO	Other (Co-ops) [Graham County and Duncan tend to be different]	AZ Best Practice	Issue
23	Dispute resolution process for bill data between UDC & customer	Customer notified APS via phone of any disputed bill data. APS will research disputed data and re-bill if needed.	Customer notified APS via phone of any disputed bill data. APS will research disputed data and re-bill if needed.	The ESP shall be responsible for notifying the customer and adjusting the bill for ESP charges affected by the meter or billing error. TEP shall be responsible for any recalculation of any incorrect TEP charges. Following the receipt of any recalculated charges from TEP, the ESP will apply the charges or credits to the customer's next normal monthly bill, unless the parties otherwise agree that the ESP send an interim bill including the TEP charges to the customer. TEP will transmit corrected billings to the ESP for incorporation in the customer's bill using one of the following methods: TEP will transmit corrected billings to the ESP for incorporation in the customer's bill using one of the following methods: a. By sending a cancellation notice, which cancels the bill in its entirety, and if appropriate, a re-bill will be included in same transmission. b. By transmitting an adjustment amount with a description of the adjustment.	By sending a cancellation notice, which cancels the bill in its entirety, and if appropriate, a re-bill will be included in same transmission. By transmitting an adjustment amount with a description of the adjustment. By transmitting an adjustment amount with a description of the adjustment.F41			

#	Business Area/Rule	APS	SRP	TEP	TRICO	Other (Co-ops) [Graham County and Duncan tend to be different]	AZ Best Practice	Issue
24	Bill inserts & how delivered to ESP	All APS customers, including Direct Access customers, shall receive mandated legal, safety and other notices equally in accordance with A.A.C. R14-2-204 (B). If the ESP is providing consolidated billing, APS shall make available one (1) copy of these notices to the ESP for distribution to customers or, at the ESP's request, in electronic format to the ESP for production and communication to electronically billed customers. If APS is providing consolidated billing services, APS shall continue to mail these notices in the billing envelope and may use the billing envelope as it does in current practices for providing such information.	N/A	All TEP customers, including Direct Access customers, shall be provided with all mandated legal, safety and other notices in accordance with ACC regulations. TEP shall make available one hard copy of all mandated legal, safety and other notices per customer to the ESP for distribution to its customers, or at the ESP's request, in electronic format for production and communication to its electronically billed customers. TEP and the ESP may agree to use e-mail to provide language that is to appear in printed format on the ESP consolidated bill. Messages to a specific customer may be inserted in description lines included with calculated TEP charges.				10
25	Data file format	EDI 810 version 4010	N/A	Flat files sent via Exolink (will transmit the file as it was submitted from Tucson or for a fee, transmit it as the ESP requests. After AZ 810 is standardized, Exolink will transmit using the AZ 810)	EDI 810 version 4010			

#	Business Area/Rule	APS	SRP	TEP	TRICO	Other (Co-ops) [Graham County and Duncan tend to be different]	AZ Best Practice	Issue
26	How & when data is estimated & who does the estimation	The MRSP designated for the customer account is the responsible party for performing and communicating the estimated read. Estimated reads can occur if the MRSP is unable to get reads due to access issues, extreme weather conditions, equipment failure or if a customer who reads his own meter fails to deliver his meter reading data etc. -- When APS is the MRSP, the meter read estimates will be based on either the customer usage during the same month of the previous year or based on the amount of usage during the preceding month (article 2-210)		All estimated interval or monthly meter reads shall be sent to TEP using the EDI format. Meters will be estimated on date set forth in the TEP Meter Reading Schedule. Reads will be posted by the MRSP to the TEP FTP server by 3:00 p.m. the day following the meter read for the meters that the MRSP is responsible for reading. The meter reads from TEP will be available on the TEP FTP server by 3:00 p.m. the day following the meter read for the meters that TEP is responsible for reading. All estimated data will be clearly marked with an explanation of the reason for the estimation.				19,24,5

#	Business Area/Rule	APS	SRP	TEP	TRICO	Other (Co-ops) [Graham County and Duncan tend to be different]	AZ Best Practice	Issue
27	Disconnect & reconnect for nonpayment	**DOESN'T APPLY TO ESP CONSOLIDATED** APS will notify the customer and the customer's ESP of intent to disconnect. APS will also notify the ESP once the customer is disconnected. A service charge will be imposed on the customer if a filed call is performed to leave door hanger or collect. APS will reconnect electric service for a service fee when the criteria for reconnection has been met.	**DOESN'T APPLY TO ESP CONSOLIDATED** SRP will notify the customer and the customer's ESP of intent to disconnect. SRP will also notify the ESP once the customer is disconnected. SRP will reconnect electric service for a service fee when the criteria for reconnection has been met.	**DOESN'T APPLY TO ESP CONSOLIDATED** In the event of Direct Access customer non-payment of charges for TEP provided services, TEP will be responsible for all physical disconnect activity regardless of the MSP or ESP servicing that customer. Disconnection can occur at any time after the payment due date for non-payment of any TEP-provided service. TEP will send a copy of the Direct Access customer's Disconnect Notice for non-payment to the ESP. This notice shall include customer name, address, notice date, account number, delinquent amount, total amount due, due date, the UNI number and ESP account number. TEP will notify the ESP at the end of each day which Direct Access customers remain disconnected. This notification will include the UNI number and ESP account number. With the exception of those customers who are reconnected the same day they were disconnected, TEP will notify the ESP when customers disconnected for non-payment are reconnected. This notification will include the UNI number and ESP				
28	Final bills for Bundled Charges	APS will not hold the ESP responsible for any customer Full Service final bills. The customer can be disconnected under his DA account for non-payment of APS final		TEP will not hold the ESP responsible for any customer Full Service final bills. The customer can be disconnected under his DA account for non-payment of TEP final				22

#	Business Area/Rule	APS	SRP	TEP	TRICO	Other (Co-ops) [Graham County and Duncan tend to be different]	AZ Best Practice	Issue
29	Final bills for DA Charges			In the case of a physical disconnect final bill, TEP will provide the ESP with the TEP final bill charges by 3:00 p.m. on the fifth business day following the actual disconnect date. If TEP billing charges have not been received by such date, the ESP may render the bill without such TEP charges; however, the ESP shall include a message on the bill stating that said charges are forthcoming. TEP will then render a separate bill for the TEP charges, unless a mutual agreement is made between TEP and the ESP to have a final bill produced and sent to the customer for the TEP final charges. TEP charges shall be calculated based on the existing TEP billing cycles regardless of the party providing the meter reading. TEP charges shall be conveyed to the ESP using ExoTran™.				
30	Back bills for customer billing	Pursuant to Schedule 1, APS can backbill up to 6 months	UDC Consolidated - Back bill up to 6 months	Pursuant to Article 24 TEP can backbill up to 6 months				7,19,24

#	Business Area/Rule	APS	SRP	TEP	TRICO	Other (Co-ops) [Graham County and Duncan tend to be different]	AZ Best Practice	Issue
31	Theft or tampering	APS shall notify ESP immediately and ESP shall notify APS immediately of any suspected unauthorized energy use. ESP shall ensure that a heavy duty lock ring is installed to secure any meter that does not require a monthly local (i.e., manual) meter read or shall utilize a light duty lock ring to secure meters equipped with meter tamper reporting technology equipped with tamper reporting capabilities. The Parties agree to preserve any evidence of unauthorized energy use. Once unauthorized energy use is suspected, APS, in its sole discretion, may take any or all of the actions permitted under APS' applicable tariffs and schedules and shall notify ESP of any such action taken. APS will coordinate with the ESP, the estimated amount of usage that will be back billed to the customer.	SRP shall notify ESP immediately and ESP shall notify SRP immediately of any suspected unauthorized energy use. ESP shall ensure that a heavy duty lock ring is installed to secure any meter that does not require a monthly local (i.e., manual) meter read or shall utilize a light duty lock ring to secure meters equipped with meter tamper reporting technology equipped with tamper reporting capabilities. The Parties agree to preserve any evidence of unauthorized energy use. Once unauthorized energy use is suspected, SRP in its sole discretion, may take any or all of the actions permitted under SRP applicable tariffs and schedules and shall notify ESP of any such action taken. SRP will coordinate with the ESP, the estimated amount of usage that will be back billed to the customer.	In accordance with ACC rules, TEP has the right to disconnect electric service to the customer for a variety of reasons, including, but not limited to, the non-payment of TEP final bills or any past due charges by the customer, or evidence of safety violations, energy theft, or fraud, by the customer. TEP will perform the disconnect for non-payment regardless of the ESP. The following provides for service disconnects and reconnects. TEP shall notify the customer and the customer's ESP of TEP's intent to disconnect electric service for the non-payment of TEP charges prior to disconnecting electric service to the customer. TEP shall further notify the ESP at the time the customer has been disconnected. To the extent authorized by the ACC, a service charge may be imposed on the customer if a field call is performed to disconnect electric service.				
32	Policy for ESPs to change customers cycle	Currently, this is not an option	N/A	This is not an option at this time.				

#	Business Area/Rule	APS	SRP	TEP	TRICO	Other (Co-ops) [Graham County and Duncan tend to be different]	AZ Best Practice	Issue
33	When are new account numbers assigned	If the customer is an existing APS customer switching to DA, a new UDC Customer Account Number will be assigned during the processing stages of each incoming RQ DASR. If the customer is a new customer within APS' territory, a new UDC Customer Account Number will be assigned during the initial application with our call center. In addition, the account number could change if certain order or billing work is done.	Assigned during re-districting and if certain order work is performed,	UDC Customer Account Numbers are tied to the customer and do not change.	Assigned during re-districting and if certain order work is performed,			
34	When is a new read cycle assigned	During re-districting.		During re-districting (TEP has not redistricted in 5 years.)				
35	How are customer deposits handled for each billing options	**Dual Billed** - only retain portion of the deposit to secure the UDC charges only, the remaining deposit will be refunded. **ESP Consolidated** - 100% of the customer deposit is applied to the Standard Offer final bill and any remaining deposit will be refunded to the customer. **UDC Consolidated** - only retain portion of the deposit to secure the UDC charges only, the remaining deposit will be refunded.	**Dual Billed** - only retain portion of the deposit to secure the UDC charges only, the remaining deposit will be refunded. **ESP Consolidated** - 100% of the customer deposit is applied to the Standard Offer final bill and any remaining deposit will be refunded to the customer. **UDC Consolidated** - only retain portion of the deposit to secure the UDC charges only, the remaining deposit will be refunded.	**Dual Billed** - only retain portion of the deposit to secure the UDC charges only, the remaining deposit will be refunded. **ESP Consolidated** - 100% of the customer deposit is applied to the Standard Offer final bill and any remaining deposit will be refunded to the customer. **UDC Consolidated** - only retain portion of the deposit to secure the UDC charges only, the remaining deposit will be refunded.	**Dual Billed** - only retain portion of the deposit to secure the UDC charges only, the remaining deposit will be refunded. **ESP Consolidated** - 100% of the customer deposit is applied to the Standard Offer final bill and any remaining deposit will be refunded to the customer. **UDC Consolidated** - only retain portion of the deposit to secure the UDC charges only, the remaining deposit will be refunded.			23
36	How are rebate/rebills handled	Reverse the bill that was produced in error and rebill with correct information in the same transaction.						7
37	Will Service End and Beginning periods be passed in the 810	Yes	N/A	Yes				
38	Will customer payment date be passed on the 810 for ESP Consolidated	No	N/A	No				13
39	Will levelized billing be offered to Direct Access customers?	Yes for Dual and UDC Consolidated billing and NO for ESP Consolidated billing	Yes for UDC and Dual Billing	No				17

#	Business Area/Rule	APS	SRP	TEP	TRICO	Other (Co-ops) [Graham County and Duncan tend to be different]	AZ Best Practice	Issue
40	Will Summary billing be offered to Direct Access customers?	Yes for Dual and UDC Consolidated billing and NO for ESP Consolidated billing						21 (15)
41	What is the billing compliance testing procedure?	Not addressed at this time	Not addressed at this time	Not addressed at this time	Not addressed at this time	Not addressed at this time		
42								
43								
44								
45								

QUESTIONS ASKED BY THE GROUP

Questions/Concerns	Answers
Is there some way that sub-committee members can help with a data dictionary?	Marvin Buck volunteered to chair a group to develop a glossary of terms to be used for a data dictionary. Eugene Slechta and Shirley Renfroe volunteered to help with the glossary.
How can we solicit more participation?	Entities can arrange and pay for teleconferencing. Let MRSP and MSP groups know we need help. Commission Staff will send the issues list and a letter to all certificated ESPs.
Can we get a Website for communications?	Commission Staff will look into it.
UBP, CUBR, other groups are looking at the same metering issues. Is there a similar template from other groups?	Some PSWG participants are participants in the other groups and will provide input as needed. UIG 650 has just been approved and is available on www.uig.org.
Is there a drive to minimize (rather than maximize) the number of metering data elements?	yes
Do we apply the "Do we care" rule before we finalize? Are there some things that we have to standardize but some things are OK to do differently?	Priority numbers are assigned to issues. Always ask yourself the question, Can I live with this?
Has production on the final report begun?	The Policy Group has developed a draft of the report format.
Do utilities have something in place where provider can buy meter in field?	
Are issues focused on interval meters?	no
When you send information to ESP, is it bill ready?	yes
Can you talk about customer bill component?	yes
Does XML require more hard drive space? Is there other technology besides EDI and XML? We want updates from XML users. What degree of technical merit is to be gained ? What other utility business arenas is it being used in?	
There is concern with the level of detail needed in order to be enforced.	It is important for sub-teams to identify rule changes required and provide support for why changes are needed.
Can you ask for temporary rule waivers?	yes
Growing concern as ESP that we don't become so detailed it prohibits operations in Arizona (separate process, protocol, rules, etc.)	
Give us opportunity to review definitions on template.	